Date: Mon, 5 Sep 94 04:30:27 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #264
To: Ham-Homebrew

Ham-Homebrew Digest   Mon, 5 Sep 94   Volume 94 : Issue 264

Today's Topics:

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 3 Sep 1994 23:06:11 GMT
From: elroy.jpl.nasa.gov!sdd.hp.com!col.hp.com!csn!yuma!lamar.ColoState.EDU!
greendot@ames.arpa
Subject: 10 meter amp?
To: ham-homebrew@ucsd.edu

  I have a ten meter amplifier, not sure what brand but it uses 1 2sc2290 and 4 2sc2879 finals. The 2sc2290 drives the other four. My question is if the driver final (1 2sc2290) was going bad would it cause the amplifier to throw out of frequincy??? My swr will sometimes be good about 1.4 and then will go to about 3 and the amp will heat up very rapidly. Just a week ago it was working fine with a low swr. Any advice would be greatly appreciated!!
Thanks Robert

Date: Sun, 4 Sep 1994 19:19:07 +0000

From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!gatech!udel!
news.sprintlink.net!demon!arkas.demon.co.uk!Michael@network.ucsd.edu
Subject: 10 meter amp?
To: ham-homebrew@ucsd.edu

In article <34avh3$3dpt@yuma.ACNS.ColoState.EDU>
greendot@lamar.ColoState.EDU "Robert Taylor" writes:

> I have a ten meter amplifier, not sure what brand but it uses 1 2sc2290 and 4
> 2sc2879 finals. The 2sc2290 drives the other four. My question is if the
> driver final (1 2sc2290) was going bad would it cause the amplifier to throw
> out of frequincy???

The driver by itself is probably not a problem, as it is a single device stage. Sounds like the other units are in parallel, so one of those dropping out would probably result in reduced output. Dry joints in tuning tanks, etc., will cause problems, but again, reduced / no output will most likely result.

I'd try the suggestion below first ... it's easiest to eliminate, and could save a lot of head-scratching:

> My swr will sometimes be good about 1.4 and then will go
> to about 3 and the amp will heat up very rapidly.

I'm not surprised! :-)

> Just a week ago it was
> working fine with a low swr. Any advice would be greatly appreciated!!
> Thanks Robert

Sure it's not an intermittent problem with your antenna system? By "antenna system" I mean *everything* from the antenna port on your SWR meter through to (and including) the antenna.

I had something like this with a Swan 500 C once - eventually I pulled down the antenna (a dipole) and found a dry joint in my homebrew balun. One touch with the soldering iron solved the problem. :)

A suggestion: Next time you have the problem, QRT, disconnect the antenna cable from the SWR meter, and put a dummy load there instead. Transmit, and see what you get for VSWR & output power. I'd swap back and forth a few times between antenna and dummy load just to check that disturbing the antenna cable connector doesn't "fix" the problem.

The results of this test will at least isolate the problem to one of two parts in your set-up.

Feel free to email me at michael@arkas.demon.co.uk if you have questions, etc.

73's

--
Mike Dower
G0VEY   'Quoth the raven, "Never more".' ... Poe
VK2ENG

Date: Sat, 3 Sep 1994 19:04:31 GMT
From: elroy.jpl.nasa.gov!usc!howland.reston.ans.net!agate!library.ucla.edu!csulb.edu!csus.edu!netcom.com!acooney@ames.arpa
Subject: Circuit Bd Software for Macs
To: ham-homebrew@ucsd.edu

Ranson J. Pelt (pelt@vt.edu) wrote:
: Does anyone know of software to develop circuit boards designed for the Mac???

: --
: Ranson Pelt
: pelt@vt.edu
: nz4i

Since this may be of interest to others, I'll post it. There are at
least two I know of that are still producing for the Mac:

McCAD Series
By: VAMP
     6753 Selma Ave.
     Los Angeles, CA 90028
     (213) 466-5533
They've been around for many years, and their stuff runs from $400 for
bare-bones, to about $4,000 for full-blown rip and retry autorouting.

CAD/CAM Professional
By: Douglas Electronics
     2777 Alvarado St.
     San Leandro, CA 94577
     (510) 483-8770
They're primarily a pc board house, and wrote this software to help
drum up business. Their software comes with a utility that'll dial
their pcb fab and get you an immediate quote on the board you've
just drawn up. Click a button, and it'll download the order -- and
they'll ship to you when it's done. Schematic capture and route
software is around $3,500.

In addition, there's a company in Canada that produces a pretty comprehensive schematic capture and digital simulation package for the Mac, called DesignWorks. I've used it for years with pretty fair results.

DesignWorks
By: Capilano Computing
406-960 Quayside Drive
New Westminster, B.C., Canada, V3M 6G2
(604) 522-6200
Their software will generate netlists for all the popular pcb layout applications, including those for the PC. I believe it's around $500 - $1,000. Since one package they used to work with was recently discontinued, they may be keen on fitting you with whatever else is out there (ie., they'd know what was available). Call them...

And now, I've got to get my $0.02 worth in. I'm an electrical engineer, and have tried (for years) to hang on as one of a mere handful who use Macs for engineering. I bought Protel's AutoTrax pcb route application with DesignWorks schematic capture a couple of years ago, and Protel has since discontinued both sales and support of their Mac software. They've decided to pursue the Windoze market. In addition, I bought Claris CAD for the Mac, and it's since been discontinued. The writing on the wall, folks, is that Apple isn't subsidizing or pushing the Mac as an engineering machine, and engineering software companies are walking away from the Mac. Apple was to pump money into Autodesk's AutoCAD for the Mac platform, and word is they backed out. In the mean time, big bucks are being dumped on the multimedia and graphics software firms. Don't be fooled (as I was): Apple has apparently no intentions of pursuing the engineering market. Buyers of engineering software beware. I spent around $3,000 for pcb software that won't run under system 7, and has some fatal bugs that won't ever be fixed. No amount of money will buy me an upgrade. How much will you spend?

Alan

in a thousand of us who

Date: Sun, 4 Sep 1994 21:45:51 +0000

From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!gatech!udel!news.sprintlink.net!demon!arkas.demon.co.uk!Michael@network.ucsd.edu
Subject: Circuit Bd Software for Macs
To: ham-homebrew@ucsd.edu

In article <acooneyCvKIBK.KHs@netcom.com>
acooney@netcom.com "Alan Cooney" writes:

[snip]
> And now, I've got to get my $0.02 worth in. I'm an electrical engineer,
^^^^^^^^^^^^^^^^^^^
Likewise

> and have tried (for years) to hang on as one of a mere handful who use Macs
> for engineering.
[snip]

I'm not a great user of Mac's, but one question that I've never thought to ask: do Mac's have a feature that equals the processing power of an intel floating point processor? I ask this because I'm wondering if a Mac could do "hack" work for low speed control systems, DSP, phased array antenna control, etc.

I've always used ibm clones for eng. work - I currently have a 486dx2/66 with 8 MB RAM purely as a "home-use" eng. machine to run antenna modelling software, etc. This involves much manipulation of large arrays containing double-precision floating-point numbers, and hence takes time. More RAM will be added (up to 32 MB) as money allows.   :)

Regards,

--
Mike Dower
G0VEY 'Quoth the raven, "Never more".' ... Poe
VK2ENG

Date: 2 Sep 1994 22:28:12 GMT
From: ihnp4.ucsd.edu!sdd.hp.com!hpscit.sc.hp.com!rkarlqu@network.ucsd.edu
Subject: Design of Helical Resonator Filter for VHF?
To: ham-homebrew@ucsd.edu

In article <jernandez-020994084704@jernandez.pbs.org>,
John J. Ernandez <jernandez@pbs.org> wrote:
>
>   Has anyone had luck building a helical resonator filter at VHF? I have the
>design equations, but it appears that the design may be to unforgiving for
>simple construction. My requirements are 160 MHz center frequency with a 2

>MHz 3 dB BW.The stopband slope should have frequencies at 158 MHz down >50
>dB. Has anyone had luck designing and building similar filters?
>
>--
>John J. Ernandez
>Communication Systems Engineer
>Public Broadcasting Service
>
>"My Favorite Location On the Pennsy" MP-46.8 Plainsboro, NJ
>
>E-Mail jernandez@pbs.org   Member:PRR Technical & Historical Society
>Phone: 703-739-5474   Southern Railway Historical Association
>Amateur Radio: KA2YAP

Wow. That's a 10 pole filter with 1.2% BW. It's going to have a lot of
insertion loss unless you get the unloaded Q well into the 1000's. You'll
need to make the filter quite large to do that, several cm. in diameter.
Also, you have to wind the coil on a mandrel to get very uniform spacing
and diameter, or the Q will plummet.

Rick Karlquist N6RK
rkarlqu@scd.hp.com

Date: Sun, 4 Sep 1994 17:39:39 GMT
From: rome.raynet.com!psinntp!psinntp!arrl.org!zlau@uunet.uu.net
Subject: Design of Helical Resonator Filter for VHF?
To: ham-homebrew@ucsd.edu

John J. Ernandez Plainsboro NJ (jernandez@pbs.org) wrote:

:   Has anyone had luck building a helical resonator filter at VHF? I have the
: design equations, but it appears that the design may be to unforgiving for
: simple construction. My requirements are 160 MHz center frequency with a 2
: MHz 3 dB BW.The stopband slope should have frequencies at 158 MHz down >50
: dB. Has anyone had luck designing and building similar filters?

There are a set of bandpass filter designs for the Amateur VHF Bands in the
last (1994) Eastern States VHF conference proceedings, which ought to be
available from the ARRL Publication Sales Deparment. One is a 222 MHz 1 MHz
wide filter, but this filter has only 2 sections. You need at least 5
sections to meet your requirement. There is a techique by Dishal outlined
in Zverev's filter book for tuning these up without a sweep setup.

--
Zack Lau KH6CP/1   2 way QRP WAS
                           8 States on 10 GHz

Internet: zlau@arrl.org   10 grids on 2304 MHz

Date: Sun, 4 Sep 1994 17:47:41 GMT
From: rome.raynet.com!psinntp!psinntp!arrl.org!zlau@uunet.uu.net
Subject: Design of Helical Resonator Filter for VHF?
To: ham-homebrew@ucsd.edu

Zack Lau (KH6CP) (zlau@arrl.org) wrote:
: John J. Ernandez Plainsboro NJ (jernandez@pbs.org) wrote:

: : Has anyone had luck building a helical resonator filter at VHF? I have the
: : design equations, but it appears that the design may be to unforgiving for
: : simple construction. My requirements are 160 MHz center frequency with a 2
: : MHz 3 dB BW.The stopband slope should have frequencies at 158 MHz down >50
: : dB. Has anyone had luck designing and building similar filters?

: There are a set of bandpass filter designs for the Amateur VHF Bands in the
: last (1994) Eastern States VHF conference proceedings, which ought to be
: available from the ARRL Publication Sales Deparment. One is a 222 MHz 1 MHz
: wide filter, but this filter has only 2 sections. You need at least 5
: sections to meet your requirement. There is a techique by Dishal outlined

Oops, that should be 10 sections. You might break it up into two 5 section
filters.

--
Zack Lau KH6CP/1   2 way QRP WAS
                           8 States on 10 GHz
Internet: zlau@arrl.org   10 grids on 2304 MHz

Date: Sun, 4 Sep 1994 17:38:09 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!EU.net!news.eunet.fi!krk!
krksun.krk.fi!lakki@network.ucsd.edu
Subject: GMSR radio to 70cm?
To: ham-homebrew@ucsd.edu

Hello!

I wonder have anyone tried to modify a GMRS - handie talkie to 70cm?

Are the radios for GMRS crystal controlled or what?

The price rate, abt $100 seems to be a right rate for a 1ch 70cm radio,

to monitor and operate a local repeater.

Please e-mail if you know anything!

/Erik

--
E R I K F I N S K A S   OH2LAK
-----------------------------------   TELE: Jo puoli miljoonaa
InterNet: Lakki@krk.fi   vihaista NMT-GSM soittelijaa
                Lakki@muncca.fi   Radiolinja on paljon huonompi
Amateur Packet: OH2LAK@OH2RBJ.FIN.EU   kuin me.

Puh.k.90-803 8404   a.940-500 6800   RL: Tele on paljon meit{ huonompi.
    t.90-693 1107   a.950-555 0551   Me ollaan ehdottomasti parempi.

Date: Sat, 3 Sep 1994 23:54:20 +0000
From: ihnp4.ucsd.edu!swrinde!pipex!demon!arkas.demon.co.uk!
Michael@network.ucsd.edu
Subject: More on Receivers that Radiate
To: ham-homebrew@ucsd.edu

In article <1994Sep2.021107.12466@egreen.wednet.edu>
           jmollan@egreen.iclnet.org "John Mollan - Harm" writes:

[snip]
> Allies retaliated by turning their radar off and listening for the
> oscillators in the U-boats' receivers. Apparently this worked well
> enough for the practice to be used during the rest of the war.
[snip]
> I would be interested any other interesting stories along the same line.

Back home I once had a brief look through Peter Wright's "Spycatcher" detailing
the author's experiences with MI5. (Can't read it here - it's banned :-)   )

He tells of using the same method to detect receivers in Russian embassies, and
also to locate the presence of Russian "illegals" in Britain. Initially they
drove around the suspect areas in specially-fitted out vans. Then they fitted
an aircraft with the necessary gear, and flew around at night listening
for LO's!

Apparently they upset the CIA something fierce when they presented a variant
of the system to them - it appeared that MI5 had kept the technology from the
CIA for a number of years.

73's

--
Mike Dower
G0VEY   'Quoth the raven, "Never more".' ... Poe
VK2ENG

Date: 3 Sep 1994 10:59:04 -0400
From: meaddata!swiss.ans.net!newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: WTD: Xtal oscillator for 6M AM rigs
To: ham-homebrew@ucsd.edu

Does anyone know of a decent (and simple!) xtal oscillator circuit/kit for
my old Gonset and Layfayette rigs. I'd like to get them xtal controlled on
receive too.

- Rob, N1NTE (RobB873302@aol.com)

End of Ham-Homebrew Digest V94 #264
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